

TRIOXYCANUS DUMBLETON, 1966 (LEPIDOPTERA), A GENUS
BASED ON A MISIDENTIFIED TYPE SPECIES, WITH PROPOSAL
OF NEW NAMES FOR THE TAXONOMIC GENUS AND SPECIES
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A. G. Butler, 1877, p. 381, pl. xlii, fig. 7, described and had illustrated a large hepialid moth, collected in central North Island, New Zealand, either by or for J. D. Enys. Butler named this unique specimen *Porina enysii*, and the specimen is in the collections at the British Museum (Natural History).

2. During an examination of type specimens of New Zealand Lepidoptera in the British Museum (Natural History) in 1980–1981, I examined the holotype of *Porina enysii*. I found that Butler's artist had depicted the colour pattern faithfully, and there is no trace of pink on the pale brown hindwings. He had drawn the antennae as short, simple unpectinate organs. There is no indication in Butler's description as to whether the specimen had antennae although in descriptions of other moths in his 1877 paper, Butler usually mentioned the antennae. In 1965, when W. H. T. Tams had the holotype photographed for L. J. Dumbleton, the antennae were missing.

3. Edward Meyrick reviewed the New Zealand HEPIALIDAE (Meyrick, 1890) and on p. 207 of his paper noted that he had seen Butler's type and that it was 'badly damaged'. By 'badly damaged', Meyrick may have meant that the antennae were missing, as the body and wings are still in good condition. In his redescription, Meyrick stated that, apart from the Butler type, he had also seen 'a specimen in Mr Fereday's collection' also badly damaged. I have examined this specimen; it is a male of an oxycanine species with a squashed body, short, unpectinate antennae, faintly pink-tinged ochreous hindwings and a forewing pattern like the specimen figured by Hudson, 1928, pl. xli, fig. 5.

4. G. V. Hudson, in Wellington, New Zealand, produced the first of his monographic accounts of New Zealand Lepidoptera in 1898. On p. 133, and on pl. xiii, fig. 10 of that work, he described and depicted a large hepialid moth with simple male antennae, which he referred to as *Porina enysii*. He gave the adult emergence time as December and January, and noted, as a diagnostic feature, 'the hindwings are pinkish brown, tinged with ochreous on the termen'. The specimen is still in Hudson's collection.

5. Alfred Philpott, 1927a, p. 39 and fig. 19 described and depicted the male genitalia of *Porina enysii* based on a specimen from Wellington, sent by Hudson. That is, he figures the genitalia of the species described by Hudson (q.v.) under the name *Porina enysii*, that has simple male antennae and pinkish ochreous or brown hindwings and emerges in December and January.

6. In his definitive monograph on New Zealand Lepidoptera, Hudson, 1928, pp. 361–362, pl. xli, figs 4–10, repeats his 1898 description and gives seven illustrations of colour forms. All have simple, short antennae, and pinkish ochreous or brown hindwings. All records are from the North Island; the emergence period is given as December–January. Some of the specimens are from Wellington Botanical Gardens, a lowland site within the city.

7. L. J. Dumbleton revised the New Zealand HEPIALIDAE in 1966. His only access to the types held in the British Museum (Natural History) was photographs of whole insects provided by W. H. T. Tams. Dumbleton, 1966, p. 940, erected the subfamily OXYCANINAE within HEPIALIDAE to accommodate those genera with forewing vein R4 branching from a common R2–R4 stem, as distinct from the HEPIALINAE, which have vein R4 branching from a common R4–R5 stem. On p. 942 (key) and p. 943 he described as new the genus *Trioxycanus* to include three large oxycanine species with ‘filiform’ or ‘feebly’ dentate male antennae. He designated as type species *Porina enysii* Butler. His description and an illustration of male genitalia agree with those of Philpott (q.v.). He published without comment the photograph of the holotype of *Porina enysii* Butler provided by the British Museum (Natural History).

8. When I examined the material identified as *Porina enysii* in the British Museum (Nat. Hist.) I found that Butler’s type was neither conspecific nor congeneric with, nor in the same sub-family (sensu Dumbleton), as the other 10 specimens, which are all from around Wellington.

9. Butler’s Holotype of *Porina enysii* has:

- (a) hepialine forewing venation, that is R4 and R5 share a common stem separate from R2–R3;
- (b) lost the antennae;
- (c) hindwings which are not tinged pink and which are not ‘tinged with ochreous on the termen’, but are a uniform light brown;
- (d) genitalia that accord (in those features that could be seen) with the features characteristic of the hepialine *Aoraia leonina* (Philpott) as depicted by Dumbleton, 1966, fig. 32–36, p. 933.
- (e) the thorax covered by loose, dark, woolly hair-like scales, with a pallid collar behind the head characteristic of *Aoraia* Dumbleton species, and not — as in the species depicted by Hudson and taken by Philpott and Dumbleton to be *Porina enysii* — covered in a dense, smooth, ochreous pile, unicolorous over the whole thorax.

10. Therefore it would appear that:

- (1) *Porina enysii* Butler, 1877 is a hepialine on venational and genital characters exhibited by the unique type male. It is a member of the genus *Aoraia* Dumbleton 1966, pp. 928 (key), 930–931. The emarginate tegumen on the genitalia of Butler’s type indicates that it is a member of the montane forest-subalpine scrub-inhabiting populations of *Aoraia leonina*

(Philpott, 1927b) as revised by Dumbleton, (1966, pp. 937–939) with an adult emergence period over March–April;

- (2) Butler's artist drew the antennae as filiform whereas they should have been drawn as pectinate;
- (3) *Porina enysii* sensu Meyrick, 1890 is a mixture, being based on Meyrick's inspection of Butler's type and on Butler's artist's fabrication (the imaginary antennae), and Fereday's male (an oxycanine) collected in the North Island;
- (4) *Porina enysii* sensu Hudson, 1898, 1928 and Philpott, 1927 cannot be that of Butler, as they differ in venational and genital characters that are of subfamily significance in Dumbleton's classification;
- (5) Dumbleton's citing of the hepialine *Porina enysii* Butler as the type species of the oxycanine genus *Trioxycanus* is a misidentification of type species as outlined in Article 70(a) and should be brought to the attention of the Commission*.

11. This episode came about because of two things: first, Butler's artist put everyone off the scent by drawing imaginary antennae. Secondly, there is a superficial wing-pattern similarity between the taxa involved.

12. None of the taxa involved in this case is of known economic importance, nor is the literature on them extensive enough to prompt consideration of conservation of names. I therefore propose that:

- (1) *Trioxycanus enysii* (Butler, 1877), now be included with *Aoraia* Dumbleton, 1966, and be an available name for North Island populations at present included in Dumbleton's concept of *Aoraia leonina* (Philpott, 1927b), as figured by Dumbleton; it is thus a subjective senior synonym of *A. leonina* in Dumbleton's concept of that species;
- (2) as Butler's specimen has been figured by Dumbleton as representing (a) the type of *Porina enysii* Butler and (b) the type species of *Trioxycanus* Dumbleton, then *Trioxycanus* becomes a junior subjective synonym of *Aoraia* Dumbleton.

13. Because there is clearly a valid entity formerly called (variously) *Porina enysii* or *Trioxycanus enysii*, and because it has been well characterised by Hudson, Philpott and Dumbleton in their publications quoted above, I propose a new generic name for *Trioxycanus* Dumbleton, 1966 (misidentified type species) and a new specific name for *enysii* sensu Meyrick (in part), Hudson, Philpott, Dumbleton et auct.

Dumbletonius Dugdale, gen. nov. pro *Trioxycanus* Dumbleton, based on misidentified species.

*The latest reviser (Dumbleton) had no first-hand access to the types, and this instance underlines the necessity for:

(a) revisers to be extremely careful to establish that their type species are surely identified, as examination by proxy—however well-intentioned and well-qualified—is not sure enough, and (b) types to be available—in a very strict sense—to revisers.

Dumbletonius sylvicola Dugdale, nom. nov. pro *Porina ensyii* auct. (e.g. Hudson, 1898, p. 133, pl. xiii, fig. 10), nec Butler, 1877.

The genus name is in memory of the late L. J. Dumbleton; the specific name indicates that this species is primarily a forest-dweller. Holotype male labelled 'Wellington 25.1.10' (no collector) 'Holotype male, *Dumbletonius sylvicola* Dugdale', in good condition, forewing markings and hindwing colour resembling that depicted by Hudson, 1928, pl. xli, fig. 4, New Zealand Arthropod Collection, DSIR, Auckland.

14. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to rule that the type species of the nominal genus *Trioxycanus* Dumbleton, 1966 is the nominal species named by Dumbleton, namely, *Porina ensyii* Butler, 1877;
- (2) to place the generic and specific names mentioned in (1) above on the appropriate Official Lists with endorsements that this is without prejudice to the taxonomic validity of *Trioxycanus* vis-a-vis *Aoraia* Dumbleton, 1966 or of *Porina leonina* Philpott, 1927 vis-a-vis *Porina ensyii* Butler, 1877.

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